

Action Requested

- ✓ Pertussis activity is at epidemic levels in Washington this year.
- ✓ Fully immunize all children against pertussis. Give a single dose of Tdap to all adolescents and adults as recommended by national guidelines (see Table 1 below for current pertussis vaccine recommendations).
- ✓ Give Tdap to all pregnant women after 20 weeks gestation, if not previously vaccinated. Tdap vaccination during pregnancy is preferred, but post-partum vaccination is acceptable if not given earlier.
- ✓ Recommend Tdap vaccination to household members and other close contacts of infants.
- ✓ Consider the diagnosis of pertussis in the following situations, even if the patient has been immunized:
 - Persistent or worsening cough with no fever or a low-grade fever in an infant ≤ 3 months, or in an older infant without other explanation.
 - Persistent or paroxysmal cough with no fever or a low-grade fever in an infant < 1 year and any of the following: apnea, cyanosis, post-tussive vomiting, seizure, pneumonia, non-purulent coryza, or inspiratory whoop.
 - Cough illness ≥ 7 days that is paroxysmal, accompanied by gagging, post-tussive emesis, or inspiratory whoop in patients of any age.
 - Cough illness of any duration and no alternative diagnosis in: 1) anyone with close contact with infants or pregnant women, 2) pregnant women in the third trimester, and 3) patients who have had contact with someone known to have pertussis or with prolonged cough illness.
 - Any cough illness ≥ 2 weeks duration with no alternative diagnosis in patients of any age.
- ✓ To confirm pertussis, send a nasopharyngeal specimen for pertussis polymerase chain reaction (PCR) and/or culture. PCR is more sensitive and rapid than culture, but is more expensive and less specific. Testing is not necessary if the patient is a close contact of a lab-confirmed pertussis case.
- ✓ Report pertussis cases within 24 hours to your [local health jurisdiction](#).

Background

In late 2011, there was a marked increase in the number of pertussis cases reported to the Washington State Department of Health. Increased activity has continued in 2012. A [weekly summary of pertussis activity in Washington](#) is available online. The [annual summary of pertussis cases reported in 2011 in Washington](#) is online.

Vaccination

The most effective strategy to interrupt pertussis transmission in the community and protect infants who are most at risk for severe pertussis disease is to vaccinate all children on time and give a booster dose to adolescents and adults (see Table 1 below). Although most children have been vaccinated for pertussis, protection from the vaccine wanes over time, so some who are fully vaccinated may still become infected. Vaccinated children and adults who get pertussis are likely to present with milder symptoms. School-aged children and adults are now the major reservoir for pertussis.

In addition to vaccination, rapid identification of pertussis cases, appropriate treatment, and isolation also help prevent ongoing transmission.

Testing

Pertussis should be considered in anyone with a severe or persistent cough. Testing is appropriate until at least 3 weeks after the onset of paroxysmal coughing. After 3 weeks of coughing, infectiousness and test accuracy

decrease significantly. **Testing is most critical for symptomatic persons who are either high-risk or who may expose someone who is high-risk (see high-risk definition below).**

If one member of a household tests positive, it is not necessary to test other family members who present with symptoms. If multiple members of a household present at the same time with symptoms, it is sufficient to test one, preferably the person with the most recent onset of symptoms.

If you have a high-risk patient whom you think should be tested but who is uninsured, contact your [local health jurisdiction](#) to talk about possible testing options.

Persons considered “high risk” from pertussis:

- Infants <1 year-old
- Pregnant women (particularly those in their third trimester)
- Anyone who may expose infants <1 year-old or pregnant women (e.g., members of a household with infants or pregnant women, child care workers who take care of infants <1 year-old, healthcare workers with face-to-face contact with infants <1 year-old or pregnant women, childbirth educators)

Treatment & prophylaxis

If you strongly suspect pertussis:

1. Treat the patient whether or not you test. Do not wait for test results. Negative test results do not rule out pertussis.
2. Exclude the patient from work, school, or child care until the patient completes 5 full days of appropriate antibiotics. Consult with your [local health jurisdiction](#) if you have questions about exclusion.
3. Give preventive antibiotics to the entire household and to any high-risk close contacts (see high-risk definition above).

See Table 2 below for recommended antibiotic treatment and prophylaxis.

Reporting

Report to your local health jurisdiction within 24 hours all patients with suspected or lab-confirmed pertussis.

Table 1. Pertussis vaccine recommendations by age*

| | |
|---------------------------|--|
| Birth-6 years | DTaP routinely recommended at 2, 4, and 6 months, at 15 through 18 months, and at 4 through 6 years. |
| 7 - 10 years | <ul style="list-style-type: none">•Tdap recommended for those not fully vaccinated.•Vaccinate according to the ACIP catch-up schedule, with Tdap preferred as the first dose. |
| 11 - 18 years | <ul style="list-style-type: none">•Tdap routinely recommended as a single dose with preferred administration at 11- 12 years of age.•If not fully vaccinated as a child, refer to the ACIP catch-up schedule to determine what vaccines are indicated.•If no Tdap at 11 to 12 years of age, Tdap recommended at the next patient encounter, or sooner if close contact with infants. |
| 19 - 64 years | <ul style="list-style-type: none">•Tdap is recommended to replace the next 10-year Td booster for any adult who has not received a previous Tdap dose.•Tdap can be administered regardless of interval since the previous Td dose, especially if adult has close contact with infants. |
| ≥65 years | <ul style="list-style-type: none">•Tdap recommended for those who have not previously received a dose and who have close contact with children under age 12 months.•Others not in contact with an infant who have not previously received a dose of Tdap may receive a single dose of Tdap in place of Td. |
| Pregnant women and | <ul style="list-style-type: none">•Tdap recommended after 20 weeks gestation for those who have not previously received a dose (or if vaccination status is unknown). |

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|----------------------------------|---|
| close contacts of infants | <ul style="list-style-type: none"> •Tdap recommended in the immediate postpartum period before discharge if not vaccinated prior to or during pregnancy. •DTaP or Tdap (depending on age) recommended for all family members and caregivers if not up-to-date, at least two weeks before coming into close contact with the infant. |
| Healthcare personnel | <ul style="list-style-type: none"> •Tdap recommended for those who have not previously received a dose and who have direct patient contact. •This is essential for those who have direct contact with babies younger than 12 months of age. |

* Information in Table 1 is based on [2012 ACIP recommendations](#).

Table 2. Recommended antimicrobial treatment and post exposure prophylaxis for pertussis, by age group

| Age group | Primary agents | | | Alternate agent* |
|---------------------------------------|---|--|---|--|
| | Azithromycin | Erythromycin | Clarithromycin | TMP-SMZ |
| <1 month | Recommended agent. 10 mg/kg per day in a single dose for 5 days (only limited safety data available.) | Not preferred. Erythromycin is associated with infantile hypertrophic pyloric stenosis. Use if azithromycin is unavailable; 40–50 mg/kg per day in 4 divided doses for 14 days | Not recommended (safety data unavailable) | Contraindicated for infants aged <2 months (risk for kernicterus) |
| 1–5 months | 10 mg/kg per day in a single dose for 5 days | 40–50 mg/kg per day in 4 divided doses for 14 days | 15 mg/kg per day in 2 divided doses for 7 days | Contraindicated at age <2 months. For infants aged ≥2 months, TMP 8 mg/kg per day, SMZ 40 mg/kg per day in 2 divided doses for 14 days |
| Infants (aged ≥6 months) and children | 10 mg/kg in a single dose on day 1 then 5 mg/kg per day (maximum: 500 mg) on days 2–5 | 40–50 mg/kg per day (maximum: 2 g per day) in 4 divided doses for 14 days | 15 mg/kg per day in 2 divided doses (maximum: 1 g per day) for 7 days | TMP 8 mg/kg per day, SMZ 40 mg/kg per day in 2 divided doses for 14 days |
| Adults | 500 mg in a single dose on day 1 then 250 mg per day on days 2–5 | 2 g per day in 4 divided doses for 14 days | 1 g per day in 2 divided doses for 7 days | TMP 320 mg per day, SMZ 1,600 mg per day in 2 divided doses for 14 days |

* Trimethoprim sulfamethoxazole (TMP–SMZ) can be used as an alternative agent to macrolides in patients aged ≥2 months who are allergic to macrolides, who cannot tolerate macrolides, or who are infected with a rare macrolide-resistant strain of *Bordetella pertussis*.

(Table 2 reproduced from Recommended Antimicrobial Agents for the Treatment and Postexposure Prophylaxis of Pertussis: 2005 CDC Guidelines, available at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5414a1.htm>)